

ALUMINUM STATISTICS
By David A. Buckingham and Patricia A. Plunkert
[All values are in metric tons (t) unless otherwise noted.]

Year	Primary production	Secondary production old	Secondary production new	Secondary production	Shipments	Imports	Exports	Industry stocks	LME stocks	Government stocks	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production	Employment	Net import reliance (%)
1900	2,296											2,296	720	14,100	6,800		
1901	2,603											2,603	730	14,200	6,800		
1902	2,615											2,615	730	13,700	7,900		
1903	3,010											3,010	730	13,200	8,500		
1904	3,674											3,674	770	14,000	10,000		
1905	4,903											4,903	770	14,000	13,000		
1906	6,407											6,407	790	14,300	17,000		
1907	7,405											7,405	990	17,300	22,000		
1908	4,844											4,844	630	11,400	17,000		
1909	13,190											13,190	490	8,800	30,000		
1910	16,060											16,060	490	8,600	45,000		
1911	17,420					1,893						19,310	440	7,700	46,000		
1912	18,960					10,320						29,290	490	8,200	58,000		
1913	21,450		4,222	4,222		10,520						31,960	520	8,600	65,000		
1914	26,300		4,102	4,102		7,370						33,660	410	6,700	69,000		
1915	41,050		7,711	7,711		3,870						44,920	750	12,000	78,000		
1916	52,210		17,510	17,510		3,020						55,230	1,340	20,000	106,000		
1917	58,900		14,610	14,610		27	4,550					54,390	1,140	14,500	123,000		
1918	56,580		13,650	13,650		816	10,940					46,440	740	8,000	128,000		
1919	58,280		16,960	16,960		6,280	2,280					62,280	710	6,700	121,000		
1920	62,610		14,060	14,060		17,830	4,270					76,170	720	5,900	125,000		
1921	24,740		8,074	8,074		14,770	1,000					38,510	490	4,400	70,000		
1922	33,400		14,780	14,780		19,910	2,130					51,180	410	4,000	87,000		
1923	58,360		19,320	19,320		19,270	2,510					75,110	560	5,400	141,000		
1924	68,300		24,490	24,490		14,430	2,880					79,850	600	5,700	168,000		
1925	63,560		39,920	39,920		19,050	5,730					76,870	600	5,600	178,000		
1926	65,000		40,100	40,100		32,380	3,460					93,920	600	5,500	195,000		
1927	73,000		41,910	41,910		28,380	6,590					94,800	560	5,300	220,000		
1928	95,000		43,360	43,360		17,620	7,130					105,500	540	5,100	258,000		
1929	102,000		43,910	43,910		23,080	7,730					117,400	540	5,100	280,000		
1930	103,900		35,020	35,020		11,550	7,860					107,600	520	5,100	272,000		
1931	81,000		27,490	27,490		6,730	2,130					85,600	510	5,500	220,000		
1932	47,000		21,770	21,770		3,710	2,010					48,700	510	6,100	153,000		
1933	38,610		30,390	30,390		6,920	2,590					42,940	510	6,500	142,000		
1934	33,650		42,090	42,090		8,430	3,800					38,290	520	6,300	170,000		
1935	54,110		46,630	46,630		9,660	1,800					61,970	440	5,200	259,000		
1936	102,000		46,720	46,720		11,600	730					112,900	450	5,300	360,000		
1937	132,800		56,750	56,750		20,490	2,440					150,800	440	5,000	483,000		
1938	130,100		35,200	35,200		8,050	5,720					132,500	440	5,100	579,000		
1939	149,000	34,260	14,680	48,940		13,010	33,640					128,400	440	5,200	720,000		
1940	187,100	41,560	31,350	73,000		16,410	25,260					178,300	410	4,800	787,000		
1941	280,400	39,110	57,830	97,000		12,170	6,770					285,800	360	4,000	1,042,000		
1942	472,700	37,770	140,500	178,200	619,000	101,700	35,180					539,300	330	3,300	1,400,000		
1943	834,600	30,020	254,800	284,800	892,000	123,200	106,700					851,100	330	3,100	1,946,000		
1944	704,000	20,770	274,600	295,400	976,000	91,600	170,600					624,900	330	3,100	1,693,000		
1945	449,100	24,780	245,900	270,700	845,000	303,100	5,350					746,800	330	3,000	870,000		
1946	371,900	82,130	170,100	252,300	740,000	38,650	15,150					395,500	330	2,800	790,000		
1947	518,900	148,600	164,200	312,800	862,000	28,420	57,260					490,100	330	2,400	1,080,000		
1948	565,200	86,770	173,400	260,200	985,000	145,900	44,950					666,200	350	2,300	1,265,000		
1949	547,000	40,460	123,500	164,000	713,000	113,700	33,730	327,000		15,000	342,000	627,000	370	2,600	1,310,000		
1950	651,900	69,000	152,000	221,000	1,094,000	232,200	20,870	363,000		41,000	404,000	871,000	390	2,600	1,488,000		
1951	759,300	70,000	196,000	266,000	1,123,000	147,000	13,610	399,000		91,000	490,000	876,000	420	2,600	1,796,000		
1952	850,000	64,000	212,000	276,000	1,212,000	137,000	9,980	435,000		8,000	443,000	1,019,000	430	2,600	2,059,000		

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1953	1,136,000	72,000	263,000	335,000	1,470,000	326,100	13,610	454,000		218,000	672,000	1,361,000	460	2,800	2,472,000		
1954	1,325,000	60,000	224,000	284,000	1,365,000	221,400	45,360	508,000		738,000	1,246,000	987,000	480	2,900	2,808,000		
1955	1,421,000	91,000	285,000	376,000	1,810,000	217,200	30,840	544,000		936,000	1,480,000	1,462,000	520	3,200	3,139,000		
1956	1,523,000	88,000	300,000	388,000	1,837,000	240,400	61,690	581,000		950,000	1,531,000	1,740,000	530	3,200	3,375,000		
1957	1,495,000	89,000	315,000	404,000	1,715,000	234,100	57,150	680,000		1,153,000	1,833,000	1,458,000	560	3,200	3,366,000		
1958	1,421,000	73,000	249,000	322,000	1,585,000	265,800	74,390	689,000		1,567,000	2,256,000	1,262,000	550	3,100	3,506,000		
1959	1,773,000	94,000	313,000	407,000	2,171,000	274,000	149,000	689,000		1,632,000	2,321,000	1,927,000	540	3,000	4,064,000		
1960	1,827,000	86,000	311,000	397,000	1,867,000	177,800	348,400	780,000		1,693,000	2,473,000	1,591,000	570	3,200	4,491,000		
1961	1,727,000	142,000	299,000	441,000	2,107,000	231,300	215,900	898,000		1,740,000	2,638,000	1,719,000	560	3,100	4,704,000		
1962	1,921,000	152,000	377,000	529,000	2,431,000	342,000	235,000	989,000		1,778,000	2,767,000	2,051,000	530	2,800	5,062,000		
1963	2,098,000	144,000	449,000	593,000	2,680,000	422,700	264,900	1,107,000		1,778,000	2,885,000	2,282,000	500	2,700	5,318,000		
1964	2,316,000	147,000	494,000	641,000	2,989,000	411,000	316,600	1,270,000		1,729,000	2,999,000	2,243,000	520	2,700	5,945,000	17,000	
1965	2,498,000	186,000	566,000	752,000	3,437,000	562,500	286,000	1,415,000		1,696,000	3,111,000	2,849,000	540	2,800	6,306,000	18,600	
1966	2,693,000	170,000	635,000	805,000	3,832,000	616,000	299,400	1,462,000		1,400,000	2,862,000	3,428,000	540	2,700	6,879,000	19,900	
1967	2,966,000	159,000	638,000	797,000	3,762,000	489,000	332,000	1,602,000		1,344,000	2,946,000	3,198,000	550	2,700	7,569,000	21,700	
1968	2,953,000	164,000	740,000	904,000	4,234,000	719,400	318,400	1,689,000		1,292,000	2,981,000	3,483,000	560	2,600	8,019,000	21,900	
1969	3,441,000	181,000	862,000	1,043,000	4,455,000	506,200	521,600	1,716,000		1,165,000	2,881,000	3,707,000	600	2,700	8,968,000	24,700	
1970	3,607,000	179,000	728,000	907,000	4,063,000	424,600	555,200	1,989,000		1,143,000	3,132,000	3,404,000	630	2,700	9,653,000	25,300	E
1971	3,561,000	196,000	757,000	953,000	4,476,000	626,000	265,800	2,280,000		1,143,000	3,423,000	3,827,000	640	2,600	10,318,000	23,500	2
1972	3,739,000	227,000	795,000	1,022,000	5,214,000	720,000	298,500	2,205,000		1,138,000	3,343,000	4,468,000	550	2,100	11,007,000	22,500	11
1973	4,109,000	240,000	886,000	1,126,000	6,241,000	557,000	508,900	1,980,000		475,000	2,455,000	5,284,000	580	2,100	12,124,000	24,400	18
1974	4,448,000	276,000	887,000	1,163,000	5,807,000	570,600	475,400	2,339,000		12,000	2,351,000	4,924,000	950	3,100	13,169,000	28,100	4
1975	3,519,000	305,000	816,000	1,121,000	4,139,000	499,000	399,200	2,721,000		10,000	2,731,000	3,544,000	770	2,300	12,144,000	23,200	E
1976	3,856,000	371,000	963,000	1,334,000	5,264,000	679,500	439,100	2,585,000		2,000	2,587,000	4,611,000	910	2,600	12,622,000	24,800	9
1977	4,118,000	482,000	974,000	1,456,000	5,567,000	758,400	372,900	2,588,000		2,000	2,590,000	4,982,000	1,050	2,800	13,779,000	26,400	7
1978	4,358,000	522,000	996,000	1,518,000	6,204,000	979,800	471,700	2,492,000		2,000	2,494,000	5,484,000	1,120	2,800	14,131,000	28,600	11
1979	4,557,000	557,000	1,055,000	1,612,000	6,206,000	762,000	701,300	2,325,000		2,000	2,327,000	5,342,000	1,560	3,500	14,555,000	29,600	4
1980	4,654,000	617,000	960,000	1,577,000	5,406,000	647,000	1,346,000	2,302,000		2,000	2,304,000	4,594,000	1,680	3,300	15,383,000	27,200	E
1981	4,489,000	758,000	1,031,000	1,789,000	5,497,000	848,000	787,000	2,995,000		2,000	2,997,000	4,615,000	1,320	2,400	15,079,000	28,100	E
1982	3,274,000	782,000	884,000	1,666,000	4,908,000	878,000	748,000	2,802,000		2,000	2,804,000	4,379,000	1,030	1,700	13,433,000	21,400	7
1983	3,353,000	820,000	953,000	1,773,000	5,848,000	1,091,000	776,000	2,263,000		2,000	2,265,000	5,027,000	1,510	2,500	13,904,000	19,300	17
1984	4,099,000	825,000	935,000	1,760,000	6,349,000	1,477,000	734,000	2,690,000		2,000	2,692,000	5,240,000	1,350	2,100	15,705,000	21,400	7
1985	3,500,000	850,000	912,000	1,762,000	6,378,000	1,420,000	908,000	2,343,000		2,000	2,345,000	5,209,000	1,080	1,600	15,398,000	18,600	16
1986	3,037,000	784,000	989,000	1,773,000	6,525,000	1,967,000	753,000	2,235,000		2,000	2,237,000	5,143,000	1,230	1,800	15,412,000	13,900	26
1987	3,343,000	852,000	1,134,000	1,986,000	6,868,000	1,850,000	917,000	1,894,000		2,000	1,896,000	5,469,000	1,590	2,300	16,514,000	15,700	23
1988	3,944,000	1,045,000	1,077,000	2,122,000	6,838,000	1,620,000	1,247,000	1,883,000		2,000	1,885,000	5,373,000	2,430	3,300	18,495,000	19,400	7
1989	4,030,000	1,011,000	1,043,000	2,054,000	6,755,000	1,470,000	1,615,000	1,822,000		2,000	1,824,000	4,957,000	1,940	2,500	19,010,000	19,900	E
1990	4,048,000	1,359,000	1,034,000	2,393,000	6,641,000	1,514,000	1,659,000	1,820,000		2,000	1,822,000	5,264,000	1,630	2,000	19,299,000	19,500	E
1991	4,121,000	1,317,000	969,000	2,286,000	6,354,000	1,490,000	1,762,000	1,775,000	168,000	2,000	1,945,000	5,043,000	1,310	1,600	19,652,000	19,900	E
1992	4,042,000	1,612,000	1,144,000	2,756,000	6,847,000	1,725,000	1,453,000	1,875,000	224,000	57,000	2,156,000	5,715,000	1,270	1,500	19,532,000	19,800	1
1993	3,695,000	1,632,000	1,312,000	2,944,000	7,326,000	2,545,000	1,207,000	1,983,000	169,000	57,000	2,209,000	6,612,000	1,180	1,300	19,773,000	18,800	19
1994	3,299,000	1,503,000	1,583,000	3,086,000	8,169,000	3,382,000	1,365,000	2,074,000	18,000	57,000	2,149,000	6,879,000	1,570	1,700	19,211,000	17,800	30
1995	3,375,000	1,505,000	1,684,000	3,189,000	8,258,000	2,975,000	1,610,000	1,997,000	45,000	57,000	2,099,000	6,295,000	1,890	2,000	19,668,000	17,800	23
1996	3,577,000	1,574,000	1,733,000	3,307,000	8,321,000	2,808,000	1,497,000	1,862,000	33,000	57,000	1,952,000	6,609,000	1,570	1,600	20,750,000	18,200	22
1997	3,603,000	1,526,000	2,020,000	3,546,000	8,869,000	3,078,000	1,571,000	1,864,000	8,000	0	1,872,000	6,716,000	1,700	1,700	21,485,000	18,000	23
1998	3,713,000	1,495,000	1,948,000	3,443,000	9,256,000	3,546,000	1,587,000	1,932,000	13,000	0	1,945,000	7,093,000	1,440	1,400	22,107,000	18,200	27

Aluminum Worksheet Notes

Data Sources

Sources of data for the Aluminum worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor Mineral Resources of the United States (MR), and Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS). The years of publication and corresponding years of data coverage listed in the References section below. Other data sources include the Materials Survey—ALUMINUM, compiled for the Office of Defense Mobilization by the U.S. Department of Commerce, 1956, (MS–Al), Metal Prices in the United States through 1998 (MP98), compiled and published by the U.S. Geological Survey in 1999, U.S. Bureau of Labor Statistics, the London Metal Exchange (LME), and the Aluminum Association, Inc. Blank cells in the worksheet indicate that data are not available.

Primary Production

Data are domestic primary aluminum production. Data are from the MR and MYB.

Secondary Production—Old Scrap

Domestic secondary production of old aluminum scrap. Data are from the MR and MYB. Production data are not available for years 1900–38.

Secondary Production—New Scrap

Domestic secondary production of new aluminum scrap. Data are from the MR and MYB. Production data are not available for years 1900–12.

Secondary Production

Total domestic secondary production of old and new aluminum scrap. Data are from the MR and MYB. Production data are not available for years 1900–12.

Shipments

Data are the net shipments to domestic aluminum markets. Data are from the Aluminum Association Inc. Data are not available prior to 1941.

Imports

Aluminum imports into the United States. Data are from two sources. Import data for years 1911–20 are from the MS–Al, and data for years 1921–98 are from the MR and MYB. Data for years 1900–10 are not available.

Exports

Aluminum exports from the United States. Data are from two sources. Export data for years 1917–20 are from the MS–Al, data for years 1921–98 are from the MR and MYB. Data for years 1900–16 are not available.

Industry Stocks

Industry stocks data as of end of year (December 31). Data from the MR and MYB. Stock data for years 1900–48 are not available.

LME Stocks

London Metal Exchange (LME) stocks of primary aluminum and aluminum alloy ingots at the end of the year (December 31) in U.S. warehouses only. Data are from the London Metal Exchange (LME). Data prior to 1991 are not available.

Government Stocks

U.S. Government stocks as of end of year (December 31), of primary aluminum ingots held in the Defense National Stockpile. Data are from the MR and MYB. Data prior to 1949 are not available. Zeros are used where data are actually “0.”

Stocks

Total aluminum stocks of the United States, includes industry, LME, and Defense National Stockpile stocks as of end of year (December 31). Data sources include the MR and MYB and the LME. Data prior to 1916 are not available.

Apparent Consumption

Estimated U.S. aluminum apparent consumption calculated using the following equation:

APPARENT CONSUMPTION = PRIMARY PRODUCTION + SECONDARY RECOVERY (OLD SCRAP) + IMPORTS – EXPORTS ± ADJUSTMENTS FOR INVENTORY (STOCK) CHANGES.

Data developed by Patricia Plunkert, USGS Aluminum Commodity Specialist, from data in the MR, MYB sources. If data for a particular category were unavailable, the data were presumed to be zero in making the above calculation.

Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton (t) of aluminum apparent consumption. It is estimated from the “Annual Average Primary Aluminum Price,” in U.S. dollars, as reported in the MP98.

Unit Value (98\$/t)

Data are calculated by dividing the “Unit Value,” determined previously, by the Consumer Price Index conversion factor with a base year of 1998 U.S. dollars. This results in a “Unit Value” in constant 1998 U.S. dollars.

World Production

Data are defined as world primary aluminum production data from the MR and MYB.

Employment

Data are employment in the domestic aluminum industry. Data are from the U.S. Bureau of Labor Statistics.

Net Import Reliance

Data are defined as:

$$\text{IMPORTS} - \text{EXPORTS} \pm \text{ADJUSTMENTS FOR GOVERNMENT AND INDUSTRY STOCKS CHANGES.}$$

Data are from the CDS and MCS sources. The “E” indicates that the United States was a net exporter of aluminum for that year.

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